

IN THE CLAIMS

We claim :

1. A method comprising:
providing a component, said component having a bond pad;
forming a passivation layer over said component;
forming a via in said passivation layer to uncover said bond pad; and
forming an under bump metallurgy (UBM) over said passivation layer, in said via, and over said bond pad, said UBM comprising an alloy of Aluminum and Magnesium.
2. The method of claim 1 further comprising:
forming a photoresist over said UBM;
forming an opening in said photoresist to uncover said UBM over said bond pad;
forming a solder over said opening;
removing said photoresist;
removing an exposed portion of said UBM that is not covered by said solder;
and
reflowing said solder into a bump.
3. The method of claim 1 wherein said alloy in said UBM comprises about 0.5-2.5% by weight of Magnesium.
4. The method of claim 1 wherein said alloy in said UBM is formed by co-sputtering said Aluminum and said Magnesium.

5. The method of claim 4 further comprising forming a bottom Titanium underlying said alloy in said UBM.

6. The method of claim 4 further comprising forming a top Titanium overlying said alloy in said UBM.

7. An under bump metallurgy (UBM) comprising:
a lower layer, said lower layer comprising an alloy of Aluminum and Magnesium; and
an upper layer disposed over said lower layer.

8. The UBM of claim 7 wherein said alloy comprises about 0.5-2.5% by weight of Magnesium.

9. The UBM of claim 7 wherein said alloy comprises a thickness of about 100-1,000 nanometers.

10. The UBM of claim 7 wherein said lower layer further comprises a bottom Titanium underlying said alloy.

11. The UBM of claim 7 wherein said lower layer further comprises a top Titanium overlying said alloy.

12. The UBM of claim 10 wherein said bottom Titanium underlying said alloy comprises a thickness of about 20-500 nanometers.

13. The UBM of claim 11 wherein said top Titanium overlying said alloy comprises a thickness of about 20-500 nanometers.

14. The UBM of claim 7 wherein said upper layer comprises a Nickel-Vanadium alloy.

15. The UBM of claim 14 wherein said Nickel-Vanadium alloy comprises a thickness of about 50-1,000 nanometers.